ABSTRACT OF THE DISCLOSURE

The present invention comprises methods for detecting and controlling flame blowout in combustors. The blowout precursor detection system comprises a combustor, a blowout precursor detection unit, a pressure measuring device

5   and/or an optical measuring device. The methods of the present invention comprise receiving optical data measured by an optical measuring device, performing one or a combination of raw data analysis, spectral analysis, statistical analysis, and wavelet analysis on received optical data, and determining the existence of a blowout precursor based on such analyses. The present invention

10   further comprises closed-loop control methods for controlling a combustor to prevent blowout.

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